

 CALIFORNIA AIR RESOURCES BOARD	DEUTZ AG	EXECUTIVE ORDER U-R-013-0617 New Off-Road Compression-Ignition Engines
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Pursuant to the authority vested in California Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-19-095;

**IT IS ORDERED AND RESOLVED:** That the following compression-ignition engines and emission control systems produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2021	MDZXL02.2115	2.194	Diesel	8000
SPECIAL FEATURES & EMISSION CONTROL SYSTEMS			TYPICAL EQUIPMENT APPLICATION	
Common Rail Direct Injection, Turbocharger, Electronic Control Module, Exhaust Gas Recirculation, Diesel Oxidation Catalyst, Continuous Trap Oxidizer			Loader, Tractor, Dozer, Material Handler	

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for non-methane hydrocarbon (NMHC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kW-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER CLASS	EMISSION STANDARD CATEGORY		EXHAUST (g/kW-hr)					OPACITY (%)		
			NMHC	NOx	NMHC+NOx	CO	PM	ACCEL	LUG	PEAK
19 ≤ kW < 56	Tier 4 Final	STD	N/A	N/A	4.7	5.0	0.03	N/A	N/A	N/A
		CERT	--	--	4.3	0.4	0.01	--	--	--

**BE IT FURTHER RESOLVED:** That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

**BE IT FURTHER RESOLVED:** That for the listed engine models, the manufacturer has complied with the more stringent set of standards from the various power categories in conformance with Section 1039.230 (e) of the "California Exhaust Emission Standards and Test Procedures for New 2011 and Later Tier 4 Off-Road Compression Ignition Engines, Part 1-D" adopted October 20, 2005 and last amended October 25, 2012.

Engines certified under this Executive Order must conform to all applicable California emission regulations.

**This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.**

Executed on this 19TH day of June 2020.



Allen Lyons, Chief  
Emissions Certification and Compliance Division

## Engine Model Summary Template

Engine Family	1.Engine Code	2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate:	5.Fuel Rate:	6.Torque @ RPM (SAE Gross)	7.Fuel Rate:	8.Fuel Rate:	9.Emission Control Device Per SAE J1930
				mm/stroke @ peak HP (for Diesel only)	(lbs/hr) @ peak HP (for diesel only)		mm/stroke @ peak torque	(lbs/hr) @ peak torque	
MDZXL02.2115	C5EI44E	TD2.2L3	59,7@2200	65	23,8	147,5@1600	65	17,3	DDI,TC,ECM,EGR,DOC,CTOX
MDZXL02.2115	C5EI44A	TD2.2L3	59,7@2600	57	24,6	147,5@1600	65	17,3	DDI,TC,ECM,EGR,DOC,CTOX
MDZXL02.2115	C5EI44D	TD2.2L3	59,7@2300	63	24,1	147,5@1600	65	17,3	DDI,TC,ECM,EGR,DOC,CTOX
MDZXL02.2115	C5EI36A	TD2.2L3	48,8@2600	48	20,7	132,8@1600	58	15,4	DDI,TC,ECM,EGR,DOC,CTOX
MDZXL02.2115	C5EI36D	TD2.2L3	48,8@2300	48,5	18,5	132,8@1600	58	15,4	DDI,TC,ECM,EGR,DOC,CTOX
MDZXL02.2115	C5EI36E	TD2.2L3	48,8@2200	53	19,4	132,8@1600	58	15,4	DDI,TC,ECM,EGR,DOC,CTOX
MDZXL02.2115	C5EI30A	TD2.2L3	40,2@2600	42	18,1	110,6@1600	47	12,5	DDI,TC,ECM,EGR,DOC,CTOX
MDZXL02.2115	C5EI30D	TD2.2L3	40,2@2300	42,5	16,2	110,6@1600	47	12,5	DDI,TC,ECM,EGR,DOC,CTOX
MDZXL02.2115	C5EI30E	TD2.2L3	40,2@2200	45,5	16,6	110,6@1600	47	12,5	DDI,TC,ECM,EGR,DOC,CTOX
MDZXL02.2115	C5EI30EL	TD2.2L3	40,2@2200	45,5	16,6	96,6@1600	41,2	10,9	DDI,TC,ECM,EGR,DOC,CTOX
MDZXL02.2115	C5EI26A	TD2.2L3	59,7@2600	38	16,4	95,9@1600	41	10,9	DDI,TC,ECM,EGR,DOC,CTOX
MDZXL02.2115	C5EI26D	TD2.2L3	59,7@2300	37,5	14,3	95,9@1600	41	10,9	DDI,TC,ECM,EGR,DOC,CTOX
MDZXL02.2115	C5EI26E	TD2.2L3	59,7@2200	40	14,6	95,9@1600	41	10,9	DDI,TC,ECM,EGR,DOC,CTOX